

Listing of Claims

1-38. (Canceled)

39. (Currently Amended) ~~The non-human A~~ transgenic animal rat or transgenic mouse of claim 34, wherein the non-human transgenic animal expresses expressing a type IIA tau molecule under the control of a tissue-specific promoter for the expression of the type IIA tau molecule in neuronal cells, the type IIA molecule:

having at least the first 68 N-terminal amino acids and at least the last 40 C-terminal amino acids of the 4 repeat containing tau43 or the first 68 N-terminal amino acids and at least the last 20 C-terminal amino acids of the 3 repeat containing tau44 truncated;

detectable in Alzheimer's diseased brain tissue, whereas the molecules are not detectable in normal healthy brain tissue;

having higher microtubule assembly promoting activity than wild type tau in an in vitro microtubule assembly assay, wherein the microtubule assembly promoting activity can be eliminated by specific inhibitory, neutralizing monoclonal antibodies against the molecules in a microtubule assembly assay; and

wherein pathologic activity of the molecule relies on binding to the microtubular network defined by the microtubule polymerization promoting activity.

40. (Currently Amended) ~~The non-human~~ transgenic animal of claim 39, wherein the type IIA tau molecule comprises the amino acid sequence of any of SEQ ID NO: 11 to 18.

41-42. (Canceled)

43. (New) The animal of claim 39, wherein the transgenic animal exhibits cognitive impairment.

44. (New) A method of screening or testing a candidate compound for utility in the treatment of Alzheimer's disease comprising obtaining a transgenic rat or transgenic mouse according to claim 39 and using the animal to screen or test the candidate compound.

45. (New) The transgenic animal of claim 39, wherein the transgenic animal is a rat.
46. (New) The transgenic animal of claim 39, wherein the transgenic animal is a mouse.